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ABSTRACT

Opinions and research findings differ on two fundamental aspects about a teacher's impact in the classroom: the amount students learn, and the process of instruction. Although consensus is lacking, faculty evaluations are widely used by administrators in such matters as promotions, tenure, and merit increases. Studies of college students' perceptions about effective teaching indicate that students emphasize the process of instruction, especially the humanistic facets, which are not usually included in the criteria for faculty evaluations. Students do not usually rate the criteria which are used for end-of-course evaluations. If students rated the evaluation criteria at the beginning of their course, their instructors would have valuable information on which to base adjustments in the development of the course. Student perceived validity about the criteria might improve the quality of the end-of-course evaluations. Study data indicate that the product of instruction--amount of learning--is not the primary student criterion for evaluating professors. Strong implications for administrative use of faculty evaluations are suggested by the findings of several studies on student evaluation of teaching. (Author/JD)

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College Students' Perceptions of Effective

Teaching: Process Over Product

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College Students' Perceptions of Effective Teaching

Abstract

Does effective teaching produce learning in students? Is this a valid basis for evaluating a teacher's performance? There seems to be no consensus on criteria for evaluating instruction. In particular, opinions and research findings differ on two most fundamental aspects about a teacher's impact in the classroom: the amount students learn and the process of instruction. Although the consensus is missing, faculty evaluations are widely used by administrators in such matters as promotions, tenure, merit increases, etc. A study of college students' perceptions about effective teaching indicates that students emphasize the process of instruction, especially the humanistic facets, which are not usually included in the criteria for faculty evaluations. Students are not usually asked to rate the criteria which they are asked to use for such end-of-course evaluations. If they were requested to rate the criteria at the beginning of the course, their instructors would have valuable information on which to base adjustments, as indicated, in the development of the course. Student perceived validity about the criteria might increase the real quality of the end-of-course evaluations. In any event, the perceptions revealed in this study indicate that the product of instruction, amount of learning, is not the primary student criterion for evaluating professors. Strong implications for the administrative use of faculty evaluations are suggested by the findings of this and other studies on student evaluation of teaching.

College Students' Perceptions of Effective

Teaching: Process Over Product

Studies concerning one aspect or the other of teacher effectiveness, or measures of teaching evaluation, are regularly reported in professional journals. The consensus of many of these reports is that no significantly effective way has been found to measure effective teaching. Either the learning variable (amount students learn) depends upon low level cognitive achievement or longer range effects of learning cannot be measured. On the other hand, the process of instruction (which has an indirect effect on learning) has been the focus of evaluation, in which case personality and entertainment factors have been shown to effect student perceptions on more important aspects of the teaching. In few studies has it been shown that teachers are rated in terms of the students' own criteria or rankings on pre-determined criteria, however valid they may or may not be. The problem becomes one of trying to determine at least what criteria students use for rating teachers, and then to allow them to rate their instructors against the criterion levels stated by the students themselves.

The timing and use of student feedback to instructors on the nature and effectiveness of the instruction have been the focus of some of the research initiated with a purpose of improving the overall quality and validity of the use of student responses for improving instruction. Another use of student input is important as well. That is, administrators use student evaluations for the purpose of decisions on tenure, promotion, assignment, salary, etc.

Recent studies for the Educational Testing Service by a research psychologist, John Centra, (1975) have sought to determine greater reliability for student evaluation feedback. In one study it was found that feedback received at mid-semester, along with comparisons of teacher self-evaluation, resulted in adjustments in classroom sensitivity by the teacher. More adjustment was seen on areas where greatest discrepancy appeared between student and teacher perceptions. Feedback received at the end of the semester showed little or no influence on instructor adjustments. When additional comparative information was received for the following semester, adjustments became apparent. Student ratings and instructor self-ratings did not otherwise relate significantly to each other.

Centra (1973) also studied the potential permanent influence of instructors on students by investigating alumni and college student ratings of the same professors. The findings showed a great deal of similarity between the two with regard to instructors whose ratings fell into the highest or lowest categories. Centra concludes that the judgments which students make of the teachers at the end of the course tend to remain permanent (for five years, at least, since this was the length of time for the alumni).

Certain aspects of teaching may not be pertinent for students to judge, according to Centra. Such items as instructors' knowledge of his subject area, the validity of reference materials, or the intrinsic merits of the course are, perhaps, best left to be evaluated by colleagues. In Centra's studies, colleagues tended to rate their peers higher on these items than did students. Such differences of perception on the same categories indicate that other relationships between variables of faculty evaluation may be studied fruitfully.

At ETS a study is going on of the possible relationships between student evaluation responses and a variety of other variables: (1) student achievement;

(2) student cumulative grade point average; (3) expected grade in the course; (4) the potential uses of feedback, particularly the validity of actual student sincerity of response with regard to the use of evaluation feedback when only for self-improvement or for changes in promotion, tenure, salary, etc.; (5) instructor self-evaluation; (6) effects of class size; and (7) required or non-required course.

The use of feedback in the process of improving instruction was the focus of a study of perceptions of teacher behavior as a basis for follow-up training procedures (Tuckman, 1976). Graduate students, administrators and teachers at Rutgers University rated an instructor on 28 pairs of adjectives on a seven-point scale in order to determine reliability of some factors which could be used for the feedback procedures. Tuckman found that factor analysis reduced the pairs to four factors, labeled creativity, dynamism, organized demeanor, and warmth/acceptance. The procedure for using the feedback is described as a seven-step sequence beginning with a team of teachers who volunteer to give others feedback on their teaching. The participants then state their criteria for 'good' teachers on the adjective pairs. The feedback procedure continues with a variety of observation and consultation, and training based on the feedback received during the sequence. The results of this system in two studies are reported by Tuckman (1976) to be favorable in terms of quantity of change in student teachers compared to those who received no systematic feedback on specific criteria. Teachers are encouraged to try out the system with their own variations and to contribute their results to the body of knowledge on teacher evaluation and the use of feedback for improving instruction.

In a study to determine the variance in perception of pupils from different socio-economic backgrounds regarding effective teacher characteristics, Tollefson (1975) found pupils' perceptions to be independent of their backgrounds. Pupils

were agreed on four humanistic factors and one relating to skill in the presentation of subject matter. The four personal qualities were tolerance, flexibility, respect for students and enthusiasm for teaching.

Problems of validity are the topic of a summary article about student evaluations by Rodin (1975) who describes the two current accountability measures regarding 'best' teacher as: 1) teachers with the highest student ratings; or, 2) those whose students learn the most. The second of the criteria seems to be universally accepted, although notable emphasis can be found on the first! Rodin notes that the variables of student evaluation which have been researched show considerable lack of consistency. Many factors extraneous to teaching, for instance, can significantly affect ratings (such as those being studied by Centra: class size, time of day, hard or easy grading styles, etc.). Even forcing students to think seems to have a negative influence on ratings, according to Rodin.

In a study on the effects on students' ratings of teacher personality related to the content, an actor, Dr. Fox, entertained students using nonsensical content. The students rated his class very highly! Ms. Rodin concludes that theatrics could become a substitute for academic value or challenge as a means of offsetting student boredom in college classes where diligence may be stressed instead of ability.

The other accountability criterion, the amount students learn, raises the question, can learning be measured? Another question follows the first: What learning will be measured as the basis of teacher effectiveness? Rodin (1975) reports on one study in which the results of a pre-test showing student ignorance of the content were used for measuring learning in the course. According to Rodin, tests could be designed to evaluate achievements of integrated learning, as well as learning facts. The drawback to using learning as an accountability measure, says Rodin, is that meaningful understanding may not be measurable within the limits of time in the course, so that student learning measurements might be reduced to their recitation of basic facts.

Rodin states that problematic questions arise if evaluation of teaching has to do with the effect of the teaching on the student. Which effect, for example, is the one to be maximized: entertainment, challenge, knowledge, understanding, practical value, etc.? Other areas of potentially valuable effect worthy of being evaluated are: depth of understanding, change in sensibilities, openness to new ideas and information in an area, appreciation of learning (of a subject, or in general) as a form of life-long activity (for recreation or human survival), tolerance for ambiguity of questions over answers, the habit of rational thought, and the shucking of parochialism. These, and possibly many others, may be suggested as alternative measures of learning to the standard one of the amount students learn. The current emphasis in accountability (student satisfaction or amount learned) is due to the fact that the responses can be quantified, according to Rodin. She concludes, therefore, that we need to search for better measures and answers as opposed to determining teacher effectiveness solely on these two sets of criteria.

Discrepancies in conceptions of teacher effectiveness, as described in detail above, may cause anxiety about accountability with regard to decisions on promotion, tenure, salary, etc. This was the rationale for a study to determine perceptions of teacher effectiveness conducted by Jenkins and Bausdell (1975). The implications were that accountability approaches might be modified depending upon the identification of certain conceptions. The investigators surveyed the perceptions of teachers and administrators on the criteria upon which teachers are regularly evaluated: factors of process, product and presage.

A survey instrument was developed based upon these categories with a number of criteria related to each category. The categories are defined below:

1. Product is the measurable change in student behavior. This implies valid changes not reached over the years, such as growth in skills, knowledge of a specific subject, or attitudes which could be attributed to the teacher as a model or from direct intervention;
2. Process means the classroom behavior of teacher; students, or in the interaction (verbal behavior, methods, classroom control, individualization of instruction, organization, etc.);
3. Presage refers to attributes of teachers' (personality, intellectual strength, training background, years of teaching, etc.).

The specific questions are listed in Appendix A with a table containing the findings. Presage was considered an indirect measure of teacher effectiveness in that it may relate to the criteria of process or product.

Sixteen criteria were used covering the three categories, although not equally distributed. Seven questions related to presage, six to process, and two covered product. A nine point scale was used with rankings from "completely unimportant" to "extremely important." The assumption was stated that adequate measures were available to determine the validity of the criteria being used.

Jenkins and Bausdell found considerable similarity among the rankings of all groups of educators and with those of the administrators. (Appendix A.) The highest ranked item was "relationship with the class," a process category. Second ranked was "flexibility," a presage item. The means on process were relatively equivalent to those on product. Both means received were significantly higher than the means on the presage items (7.64 and 7.26 vs 6.43).

According to the researchers, teachers seem to feel that what they do is important as the effects or outcomes of learning. The amount students learn was not highly rated, having been ranked 11th out of the sixteen criteria. Since the amount of learning is a prime goal of education, the researchers offered a number of probable causes for the low ranking revealed on this criterion. Teachers may be aware of the importance of learning, but as it relates to how it is achieved (process), such as in terms of the classroom atmosphere, teacher behavior, etc. There is also the problem of how one measures the multitude of educational experiences involved in learning as well as determining which

faculty are responsible for the learning. The conclusion reached in this study was that people being held accountable must be in agreement with those doing the evaluating in terms of the perceptions and the uses of the evaluative criteria.

This conclusion is reinforced in the findings of another study about evaluation which investigated the reactions of teachers to evaluation depending on its purposes. Zelenak and Snider (1975) based their study on two different philosophies about evaluation which seem to appear in the professional literature: 1) evaluation is for administrative purposes (tenure, promotion, merit raises, etc.), and 2) evaluation is the the improvement of instruction. The problem studied was a comparison of attitudes of teachers who believe in either of these two philosophies. On all of the three attitude dimensions measured, activity, evaluative and potency, the group who believed the administrative rationale for evaluation scored significantly lower than those thinking evaluation was for improvement of instruction. Zelenak and Snider concluded that teachers in the latter group are supportive of evaluation. On the other hand, those who feel that evaluation is used for administrative decisions affecting their position, tenure, salary, etc., regard the evaluation process negatively. Like Jenkins and Bausdell, they state that more communication is needed on the uses of, and perceptions about, evaluation (and the criteria) in order to overcome conflicts in the uses of evaluation of teaching.

Young and Heichberger (1975) also studied perceptions of teachers regarding supervision and purposes of supervision. Urban and rural elementary teachers viewed supervision as potentially dangerous in terms of instruction and teacher competency. Eighty-seven percent of those surveyed desired to have a role in the supervisory and evaluation process. Supervisors should be aware of teachers' philosophy and approaches to instruction, they reported. A similar majority viewed evaluation as a means for determining teacher weaknesses, not for administrative decision, in order to improve instruction through in-service help.

The present study of the perceptions of college students on various criteria, adapted from the Jenkins and Bausdell study, was an attempt to create more communication about evaluative criteria in the process of determining effective teacher qualities at the university level. Since the same differences in philosophies about evaluation of teaching exist at the college level, it might be helpful to determine, from the students themselves, rankings on certain criteria against which instructors may choose to have themselves evaluated. Baseline data may be established for comparisons of student ratings on instructors as they may differ among students in different colleges. Student inputs received at the beginning of the course on the students' own rankings of the criteria could result, as in the Centra study, in adjustments in the classroom or instructional behavior of the teacher. The present study requests student input at the beginning of the quarter and their questionnaires are returned to them at the end. This contrasts with the blind surveys handed out in the present inadequate evaluation system at Florida Technological University.

Student feedback at the end of the course, related to the students' own rankings of the criteria which the instructor is willing to use for the evaluation of his/her class, may result in changes in subsequent classes or in ratings. The students, having seen and reacted to the criteria to be used in evaluation for the course, may change their perceptions of certain criteria during the class in which related instructional activities are experienced. The effect may be to increase or decrease the perceived validity of the activity by the student. Another effect may be to increase or decrease the instructor rating on the evaluation. Comparison with such effects could be made with baseline data resulting from the survey to be conducted in this study.

The findings of this study can contribute to the fund of knowledge reported in the previous studies on perceptions of evaluation criteria. The potential for change indicated in the Centra study would be a healthy outcome

of the determination of students' perceptions concerning the criteria they might use for evaluation of instruction. Student involvement in the process of instruction might be increased in that students provide input to teachers at the beginning of the course. There can be continued monitoring of instruction in terms of the previously stated criteria, and more elucidation of the contexts of learning may be generated for the students. Problems in student evaluations due to the Hawthorne effect might be mitigated somewhat because of students indicating the importance of given criteria at the beginning of the course.

Method

Subjects In the Winter Quarter of the 1975-76 academic year at Florida Technological University, one hundred thirty-four students who were enrolled in two classes taught in the College of Education were selected to participate in the study. One group of students (N=106) with non-education majors was enrolled in an elective class from a variety of education courses offered for upper division students. (Advanced Environmental Studies are a form of upper level required general education.) The second group (N=34) was made up of students beginning the first phase of their professional teaching program. The groups were designated non-ed major and education major students.

Procedure During the second week of classes, the students completed a questionnaire containing 14 selected criteria for effective teachers, adapted from a study by Jenkins and Bausdell (Appendix B). Students were asked to rate each criterion on a scale of 1 (low) to 9 (high) in terms of its importance in determining teacher effectiveness. Individual questionnaires were coded so that they could be used for evaluation of instruction at the end of the course.

Results

Student responses on the questionnaires were subjected to a frequency distribution on all 14 criteria to determine means and standard error of distribution.

Tests were conducted on comparative means and standard deviations with significance required at the .05 level. In addition, student responses were compared to data received in the Jenkins and Bausdell study of teacher and administrator perceptions. Insufficient data prevented more than examination by inspection, however.

The highest rated criterion for both groups was the teacher's knowledge of the subject matter (#14). The means for this criterion were 8.67 (ed major) and 8.42 (non-ed major). The second rank criterion was the teacher's general knowledge of educational facts (#9), and the means were 8.22 (ed major) and 7.88 (non-ed major). Flexibility of the teacher (#3) was ranked third: 8.16 and 7.67. Eight of the fourteen criterion were found to be ranked in the upper three levels of importance and four in the mid-range. The lowest ranked criteria were the teacher's experience (#5), 3.06 and 4.20, and his/her community and professional activities (#11), 3.74 and 4.24.

Differences between the education and non-education majors were noted on each criterion. Significant levels ($p < .05$) of variance were revealed on criteria related to: a) teacher flexibility (#3), b) years of teaching experience (#5), c) amount students learn (#10), and d) knowledge of subject matter (#14). (Means on all questions are found in Appendix C.) Figure 1 gives a visual display of the three sets of ratings on all variables.

On the three categories of criteria used in the Jenkins and Bausdell study, student responses differed between education and non-education majors (Table 1), although not to be a significant degree. Table 11 reveals that education majors differed from perceptions reported for the teachers and administrators in the previous study. Since sufficient data were not available, significance levels could not be determined. However, inspection of differences, compared with other variances which were found statistically significant, strongly supports an assumed significant variance at $p < .05$ on certain criteria. Students differed with teachers and administrators on most of the individual criteria and by as much

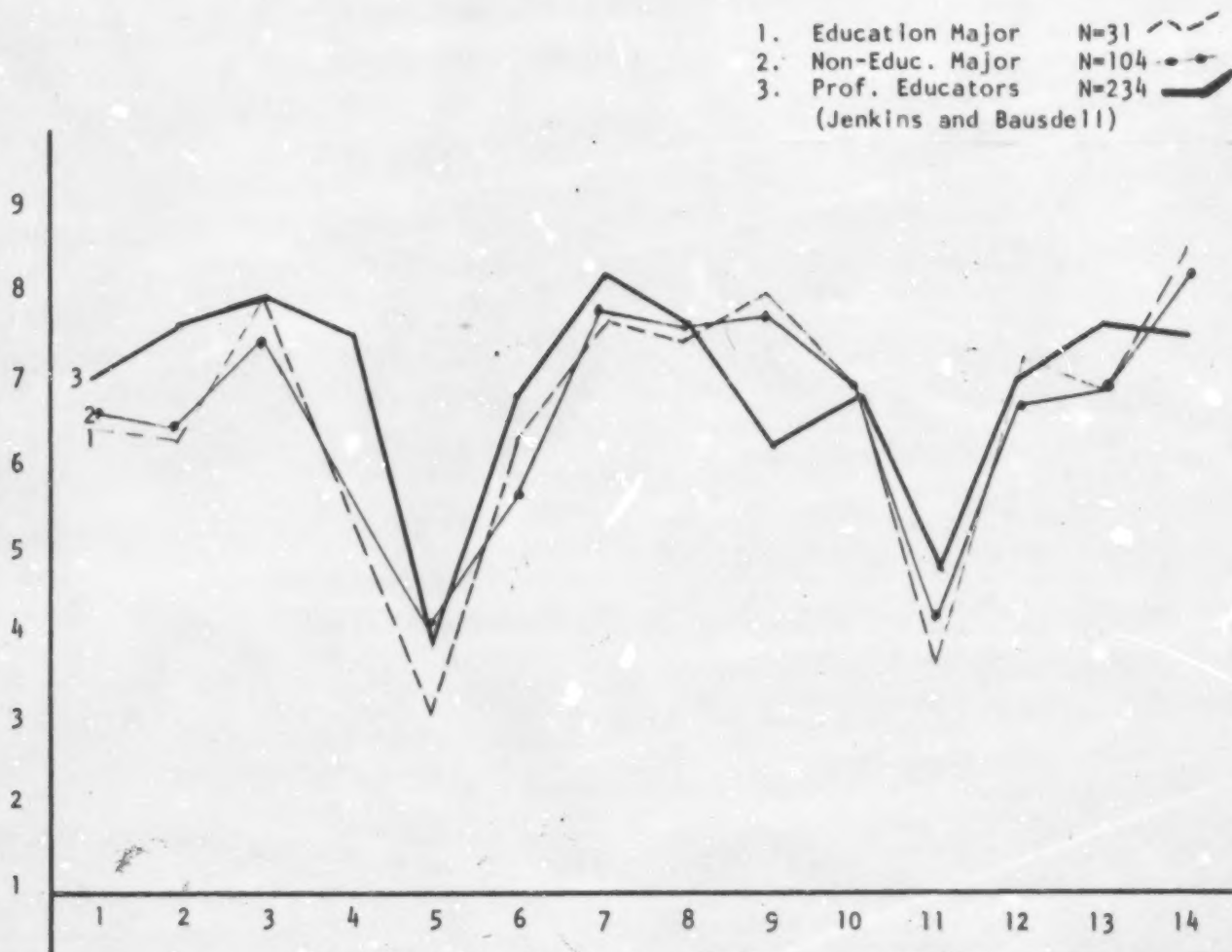


FIGURE 1. FOURTEEN CRITERIA OF EFFECTIVE TEACHERS AS PERCEIVED BY 3 GROUPS.

1. Extent to which his/her verbal behavior in classroom is student-centered.
2. Personal adjustment and character.
3. Willingness to be flexible, to be direct or indirect as situation demands.
4. Influence on student's behavior.
5. Years of teaching experience.
6. Extent to which he/she uses inductive (discovery) methods.
7. Relationship with class (good rapport).
8. Effectiveness in controlling the class (handling discussion, group work, etc.)
9. General knowledge and understanding of educational facts.
10. Amount his/her students learn.
11. Participation in community and professional activities.
12. Ability to personalize his/her teaching.
13. Capacity to perceive the world from the student's point of view.
14. Knowledge of the subject matter and related areas.

as one rating level on several. The students' means were lower on all but three variables. (Figure 1) The professionals rated two presage items, knowledge (#s 9 & 14), and amount students learn (product) lower than did both college groups. All groups reached approximate uniformity on only two criterion: willingness to be flexible and effectiveness in class control.

TABLE I. Means on Categories of Student Perceptions of Qualities of Effective Teachers

<u>Category</u>	<u>Students</u>	
	Ed Major (N=31)	Non-Ed Major (N=104)
Product	6.387	6.817
Process	7.059	6.998
Presage	6.394	6.472

Significance Levels not determined.

TABLE II. Comparison of Education Students' Perceptions and Teacher/Administrators' Perception of Categories of Qualities of Effective Teachers

<u>Category</u>	<u>Perceptions</u>	
	Teacher/Adm. (N=234)	Ed Major (N=31)
Product	7.26	6.39
Process	7.64	7.06
Presage	6.45	6.39

Significance Levels not determined.

Discussion

College students clearly perceive instruction differently from public school teachers and administrators even though instruction in college is, potentially, not much different. The perceptions that varied most markedly were those on the criteria which are used for much teacher evaluation, that is, the amount students learn (product), teachers' knowledge of general and specific content (presage), and influence on student learning behavior (product). Even though professionals have considered the product of instruction, the amount their students learned, to be important, the Jenkins and Bausdell group ranked teachers' rapport with students significantly higher. Education majors as students, however, still ranked that product criterion above the level of their future peers. They were closer to the professionals' perception on the item than were the non-ed students, however.

Interestingly, the education major's rating was closer to the professional perception on only four criteria compared to the non-educational student! The three criteria, in addition to amount of learning, relate to the concept of flexible or unstructured teaching: use of inductive methods, flexibility, and personalizing teaching. Perhaps the capacity to perceive instruction from the teacher's point of view takes place after the pre-service teacher is actually responsible for instruction.

Another of the factors frequently used in assessing an instructor's professional potential or worth, experience, received next to the lowest rating among the students and the very lowest by the professionals themselves. In addition, the potential effect on students' behavior, as suggested by Rodin, was ranked second or third lowest by both student groups.

The purpose of this study was to investigate the validity of some criteria which college students might use for evaluating the effectiveness of teaching. A comparison was made between students with education and non-education majors, and between students' perceptions and those reported by public school educators on the same criteria. The criteria were categorized into three types of responses, those relating to the product and process of instruction and presage of the teacher.

Although similarities were found between both student groups and with professionals' responses in terms of the levels on which individual criteria were rated, significant variances were revealed on criteria frequently included on evaluation instruments. On the instructor's knowledge of the subject, students rated this most important. Centra has suggested, however, that this quality is probably best measured by professional peers than by students.

The factors of dynamism and warmth in Tuckman's study are reflected in the high loadings found on presage and process items in this study. Flexibility, personalizing teaching, good rapport, and sensitivity to the students' point of view all received ratings in the upper third of the scale. The humanistic factors studied by Tollefson are clearly reflected here, as well. Interestingly, students rated the amount they learn, which might validly be evaluated by them, lower than the teachers' knowledge, which they would not likely be able to evaluate accurately. Other factors, which Rodin suggested as valuable for evaluation, were either not studied or received insignificant ratings. The concentration on subject matter in Rodin's analysis is clearly reinforced by the first choice of the students.

With regard to the uses of evaluation, as studied by Zelenak and Snider, adjustments in teacher behavior will be difficult in terms of the first two choices of the students. On other highly rated items, such as flexibility, rapport and personalizing teaching, adjustment can be more readily seen. In the manner that students differed with professional educators on key bases for evaluation, agreement on the measures of effectiveness, as suggested by Jenkins and Bausdell, would be significant for accurate interpretation of the results if adjustments are to be made. Even more importantly, if student evaluations are to be used for critical decisions about a teacher's salary, promotion or tenure, closer agreement on the criteria to be used is clearly implied by the results of this study of college students' perceptions of effective teachers. Moreover, students' perceptions about evaluation might be more perspicacious, and might validly reflect their analysis of the conduct of their courses, by knowing ahead of time the criteria for evaluation as well as the agreed upon emphasis of instruction. For example, if an instructor concentrates his/her efforts on the amount students learn (a factor which the study shows that students do not rate as highly as the teacher's knowledge), it could be announced

at the beginning of class to make students aware of the emphasis put on this criterion by the instructor. A person doing a good job of teaching, then, might be rated higher on this criterion, as well as the ones which students perceived as more important.

An accepted maxim of teaching is to "take them from what they are." If instructors used student rated criteria for evaluation of teaching, instructional strategies might be oriented more closely to potential student approaches to learning. That students concentrate attention in learning on the subject content is clear from the high rating they put on the instructor's knowledge of the subject. Instructors who believe in other modes of learning have an obligation to themselves to effectuate transfer of knowledge through other means than the exposition of facts (in very knowledgeable ways, of course). Such teachers may feel that students need to develop an expanded base for further learning for themselves. Thus, they teach not only content, but methodology as well. Therefore, a teacher can take students from "where they are" and still feel that he/she is fulfilling professional goals of teaching the subject although with methods more preferable to the instructor.

Whatever variances might exist between teacher and student perceptions on effective teacher criteria, this study supports the contention that clear agreement should be reached between faculty and administration on the relative weight which should be given to the student ratings on these and other criteria. Even the use or non-use of student evaluations bears re-examination in the light of the findings and conclusions reported from other studies on criteria for judging quality of teaching. Recent alterations at Florida Technological University in the format for administering faculty evaluations by students suggest that the system can be very faulty and that the potential for misuse by faculty and administration is high. Should students rate instructors on criteria which are often not understood similarly by many students or faculty? Should students

rate faculty without having had training in such perceptive duties? If faculty are to profit by student evaluations, and if students are to learn to understand evaluative criteria better, then having the instrument examined by students at the beginning of the course may be of value.

If, as in this study, students are able to rank criteria in terms of the importance to them, faculty will have an opportunity to relate to students in terms of the latter's perception. Similarly, faculty would have the opportunity to develop students' awareness of instructors' perceptions about effectiveness and learning strategies. If criteria are rated at an early point and are accepted for use as a comparison with end-of-course ratings, then faculty would be able to use early feedback, possibly, to avoid glaring errors which are normally evident on end-of-course evaluations. Students, also, could and should develop a perspective about the evaluative process as the class proceeds because of having seen, and rated, the criteria which the instructor will use for student feedback. Indeed, the students' own perceptions on certain criteria, for example on methods, may change after instruction by a teacher who used the methods. Further study on the possible influence of instruction variables on student perceptions at the end of the course is indicated.

Finally, the validity of the results in this study should be examined through 1) larger samples including education students more advanced in their professional preparation; 2) pre- and post-instruction sampling of student perceptions; and 3) surveys which allow students to suggest criteria for ranking in importance as well as being used for evaluation of instruction. In this vein, some of the influence on students suggested by Rodin might be worthy of study under conditions of feedback monitoring.

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Appendices

- A. Mean Ratings and Rank Order of 16 Criteria of Effective Teachers.
- B. Qualities of the Effective Teacher.
- C. Mean Ratings by College Students of Criteria for Effective Teaching.

APPENDIX A

TABLE I
MEAN RATINGS AND RANK ORDER OF THE 16 CRITERIA

Criteria (ordered by rating)	Type (Mitzel Scheme)	Mean Rating
1. Extent to which his verbal behavior in classroom is student-centered	Process	7.27
2. Personal adjustment and character	Presage	7.71
3. Willingness to be flexible, to be direct or indirect as situation demands	Presage	8.17
4. Influence on student's behavior	Product	7.65
5. Years of teaching experience	Presage	3.89
6. Extent to which he uses inductive (discovery) methods	Process	6.95
7. Relationship with class (good rapport)	Process	8.31
8. Effectiveness in controlling his class	Process	7.88
9. General knowledge and understanding of educational facts	Presage	6.43
10. Amount his students learn	Product	6.86
11. Participation in community and professional activities	Presage	4.88
12. Ability to personalize his teaching	Process	7.63
13. Capacity to perceive the world from the student's point of view	Process	7.79
14. Knowledge of subject matter and related areas	Presage	7.64

(N=264)

Type	Combined
Process	7.64
Product	7.26
Presage	6.43

Source: Phi Delta Kappan, vol. 55/8:573 (April 1974)

APPENDIX B
SURVEY
QUALITIES OF THE EFFECTIVE TEACHER*

The purpose of this survey is to determine what college students believe are appropriate bases for judging the effectiveness of a teacher.

Please rate each of the following items on the nine-point scale provided. Assume that adequate measures exist to measure each of the criteria. Try to differentiate as much as possible between items. Please rate all items and be sure not to circle more than one rank for any given item.

Use the following scale to rate each of the criteria according to its importance in determining teacher effectiveness. Circle one rank for each item. Low ranks are indicative of unimportant criteria; high ranks, important. Five is, of course, average. In the second column, rate your instructor on each of these criteria (if requested, at the end of the quarter).

Criteria	Validity		Your Instructor	
	Low	High	Low	High
1. Extent to which his/her verbal behavior in classroom is student-centered	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
2. Personal adjustment and character	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
3. Willingness to be flexible, to be direct or indirect as situation demands	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
4. Influence on student's behavior	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
5. Years of teaching experience	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
6. Extent to which he/she uses Inductive (discovery) methods	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
7. Relationship with class (good rapport)	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
8. Effectiveness in controlling the class (handling discussion, group work, etc.)	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
9. General knowledge and understanding of educational facts	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
10. Amount his/her students learn	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
11. Participation in community and professional activities	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
12. Ability to personalize his/her teaching	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
13. Capacity to perceive the world from the student's point of view	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	
14. Knowledge of the subject matter and related areas	1 2 3 4 5 6 7 8 9		1 2 3 4 5 6 7 8 9	

*Adapted from Phi Delta Kappan, April 1974, p. 572-3

Dr. David W. Gurney
Secondary Education

Mean Ratings by College Students of Criteria For Effective Teaching

<u>Criteria</u>	<u>Ed. Major</u> <u>(N=31)</u>	<u>Non-ed Major</u> <u>(N=104)</u>
1. Extent to which his/her verbal behavior in classroom is student-centered	6.54	6.73
2. Personal adjustment and character	6.48	6.50
3. Willingness to be flexible, to be direct or indirect as situation demands	8.16	7.67
4. Influence on student's behavior	5.64	5.91
5. Years of teaching experience	3.06	4.20
6. Extent to which he/she uses inductive (discovery) methods	6.03	5.76
7. Relationship with class (good rapport)	7.80	7.93
8. Effectiveness in controlling the class (handling discussion, group work, etc.)	7.62	7.64
9. General knowledge and understanding of educational facts	8.22	7.88
10. Amount his/her students learn	7.12	7.70
11. Participation in community and professional activities	3.74	4.24
12. Ability to personalize his/her teaching	7.32	6.80
13. Capacity to perceive the world from the student's point of view	7.03	7.10
14. Knowledge of the subject matter and related areas	8.67	8.43

(Scale: 1-9)

Adapted from Phi Delta Kappan, April 1974, p. 572-3